



TES-1080-M12-BP2

# TES-1080-M12-BP2

➔ **EN50155 8-port unmanaged Ethernet switch with 8x10/100Base-T(X), M12 connector and 2xbypass included**

## Features

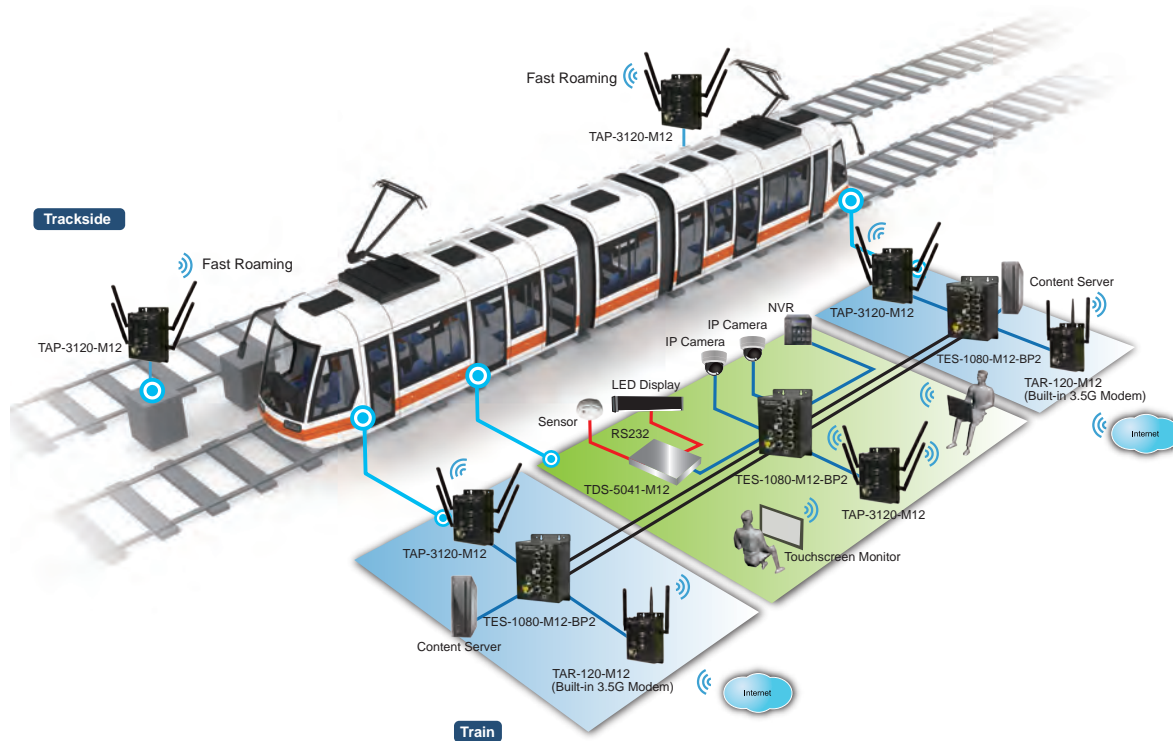
- Leading EN50155-compliant Ethernet switch for rolling stock applications
- Supports auto-negotiation and auto-MDI/MDI-X
- Supports store-and-forward transmission
- Supports flow control
- Built-in 2 sets of bypass ports
- Warning system by relay output
- M12 connectors to guarantee reliable operation against environmental disturbances
- Wall mounting enabled



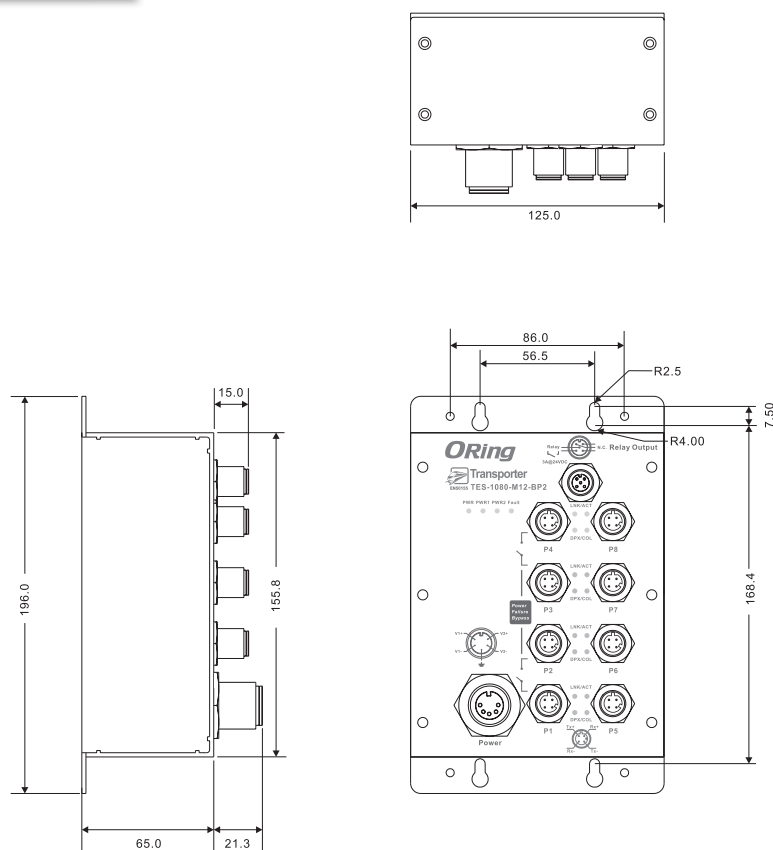
## Introduction

ORing's Transporter series Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway. The TES-1080-M12-BP2, which is compliant with the EN50155 standard, is an unmanaged Ethernet switch with 8x10/100Base-T(X) ports (4 of these ports also double as 2 sets of bypass ports). TES-1080-M12-BP2 is constructed of a rugged aluminum case and designed with Ethernet ports (M12 type connector), which provide a dust-tight connection. TES-1080-M12-BP2 EN50155 Ethernet switch use M12 connectors to ensure tight, robust connections, and guarantee reliable operation against environmental disturbances, such as vibration and shock. TES-1080-M12-BP2 includes 2 sets of bypass ports that protect the network from failures and Network maintenance by ensuring network integrity during power loss. Each set of these bypass ports includes Network ports and Monitor ports. The Network ports are used for connection to main-network connections and provide protection mechanism, and the Monitor ports are used for down-linking local networking device. When the power is on, the operating mode of the Bypass ports is set to Normal, and the local networking device is connected with main-network. When power failure occurs, the Bypass ports are swiftly set to bypass mode to isolate the main-network from the local networking device. In addition, the wide operating temperature range from -40 ~ 70°C can satisfy most of operating environment. Therefore, the switch is one of the most reliable choices for rolling stock Ethernet application.

## Practical Operation



## Dimensions



(Unit=mm)

## Specifications

ORing Switch Model	TES-1080-M12-BP2
<b>Physical Ports</b>	
10/100 Base-T(X) Ports in M12 (D-coding) Auto MDI/MDIX	8 x M12 connector (D-coding)
<b>Technology</b>	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control
MAC Table	8192 MAC addresses
Processing	Store-and-Forward
<b>LED Indicators</b>	
Power Indicator	Green : Power LED x 2
Fault Indicator	Amber : Indicate power failure event
10/100Base-T(X) M12 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision
<b>Fault Contact</b>	
Relay	Relay output to carry capacity of 3A at 24VDC (M12 connector with A-coding)
<b>Power</b>	
Redundant Input Power	Dual 12~48VDC on M23 connector
Power Consumption (Typ.)	5 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
<b>Physical Characteristics</b>	
Enclosure	IP-40
Dimensions (W x D x H)	125 (W) x 65 (D) x 196 (H)mm (4.92 x 2.56 x 7.72 inch)
Weight (g)	845 g
<b>Environmental</b>	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	5% to 95% Non-condensing
<b>Regulatory Approvals</b>	
EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-9, EN61000-4-11
Shock	IEC60068-2-27, EN61373
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6, EN61373
Safety	EN60950-1
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C)	77,444
Warranty	5 years

## Ordering Information

TES-1 **AA** **B** -M12-BP2

Code Definition	10/100Base-T(X) Port Number	Additional Port Number
<b>Option</b>	- <b>08</b> : 8 ports	- <b>0</b> : 0 port

Available Model	Model Name	Description
	TES-1080-M12-BP2	EN50155 8-port unmanaged Ethernet switch with 8x10/100Base-T(X), M12 connector and 2xbypass included
<b>Packing List</b> <ul style="list-style-type: none"> <li>TES-1080-M12-BP2</li> <li>Quick Installation Guide</li> </ul>		<b>Optional Accessories</b> <ul style="list-style-type: none"> <li>DR-45 series : 45 Watts DIN-Rail power supply</li> <li>DR-75 series : 75 Watts DIN-Rail power supply</li> <li>DR-120 series : 120 Watts DIN-Rail power supply</li> <li>SDR-240-48, 240W DIN-Rail power supply</li> <li>SDR-480-48, 480W DIN-Rail power supply</li> <li>M12C : M12 cable accessories</li> </ul>